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Biofloc fish farming book in hindi pdf

Is biofloc fish farming profitable. How to start biofloc fish farming. Biofloc fish farming pdf in urdu.

Course Outline: Introduction to Biofloc Technology The course, "Introduction to Biofloc Technology," is structured into 17 lectures and two additional resources. It provides an in-depth understanding of the biofloc system, its applications, and best practices for setting up and maintaining a successful fish farm. Lectures 1-3 cover foundational topics such as the overview of biofloc technology, introduction to demand and consumption, feed conversion ratio (FCR), and water quality parameters like PPM, ammonia levels, water alkalinity, hardness, temperature requirements for different fish types, and electricity backup systems. Lectures 6-8 delve into aspects of fish farming such as understanding different breeds, types of diseases affecting fishes, their symptoms, and methods of prevention and treatment. Lecture 9 covers partial harvesting techniques, while Lecture 10 focuses on the economic side, including tracking fish prices throughout the year, selling strategies to locals and through retail channels. Lectures 13-14 deal with practical aspects like creating a slope for water flow, the importance of air lift systems in water circulation, using wave makers, settling tanks for waste management, and measurement tools. Lecture 15 provides insights into the application process for subsidies, while Lectures 16 and 17 are dedicated to visiting the instructor's fish farm for hands-on experience. The course concludes with two additional resources: a form for visiting the instructor's fish farm (Biofloc Farm Visit Form) and a template for submitting a final project report (Final Project Report). These elements reinforce learning through practical application and submission of a comprehensive project on biofloc technology, tailored to meet the needs and challenges faced in setting up or managing a fish farm. The goal is to reach 9.6 billion people and meet their demand for animal protein, which is increasing year after year. To ensure the quality and security of natural resources for future generations, it's crucial to provide high-quality protein while minimizing environmental impact. Biotechnology plays a significant role in this context, particularly bioflock technology (BFT), which involves continuous renewal and reuse of nutrients through microorganisms. Bioflocks are aquatic ecosystems that mimic natural environments and can be used for waste treatment, aquaculture, and bioremediation. The process involves microbial processes that convert organic matter into protein-rich feed, while also purifying water. This technology has been hailed as a "blue revolution" due to its potential to produce high-quality protein with minimal environmental impact. Bioflocks are composed of microorganisms such as bacteria, yeast, fungi, and protozoa, which work together to break down organic matter and convert it into nutrient-rich feed. The process involves complex microbial interactions that result in the production of proteins, vitamins, and minerals. The bioflock system is designed to optimize water quality by using microbes to remove pollutants and excess nutrients. This technology has been shown to be highly effective in treating wastewater and producing high-quality protein for animal feed. **Project Overview** A bioflock unit consisting of 7 tanks, each with a capacity of 15,000 liters, is being proposed. The project aims to cultivate tilapia fish and produce floating pellets as feed for them. **Specifications** 1. Tank size: 4 meters in diameter and 1.5 meters deep. 2. Water quality parameters: dissolved oxygen (5 mg/L), temperature (26-34°C), pH (7.5-8), TDS (600 ppm), etc. 3. Stocking density: 100 fish/m³ (average weight of 500 grams per fish). 4. Feed type: floating pellets, with a feed conversion ratio of 1:1.2. 5. Crop cycle: 6 months. 6. Production target: 4.2 tons per crop. **Financial Analysis** 1. Initial investment: ₹6.00 lakhs (includes setting up the bioflock unit and other infrastructure). 2. Input costs: ₹1.50 lakhs per crop (includes feed, probiotics, test kits, etc.). 3. Total project cost: ₹7.50 lakhs. 4. Gross income: ₹5.46 lakhs per crop. 5. Net profit: ₹9.42 lakhs per crop. **Model Calculation** The model assumes a 15% depreciation rate and an interest rate of 12%. The calculation is based on a bioflock unit with 50 tanks, each with a capacity of 15,000 liters. **Cost Analysis for Biofloc Tank Construction** Three different cost analyses are presented for constructing biofloc tanks in various settings: saline/alkaline areas, freshwater areas, and brackish water areas. **Saline/Alkaline Areas** * Capital cost: ₹35.50 lakh (approximately $47,000 USD) + Components include tank setup, shed material, fixing charges, water supply, PVC pipes, blowers, electrical equipment, power generator, miscellaneous expenses * Input costs for one crop cycle: ₹50.00 lakh (approximately $67,000 USD) + Includes seeds, feed, probiotics, carbon source, testing kits, electricity, and other expenses **Freshwater Areas** * Capital cost: ₹20.00 lakh (approximately $27,000 USD) + Components include tank setup, shed material, fixing charges, water supply, PVC pipes, blowers, electrical equipment, power generator, miscellaneous expenses * Input costs for one crop cycle: ₹9.80 lakh (approximately $13,000 USD) + Includes seeds, feed, probiotics, carbon source, testing kits, electricity, and other expenses **Brackish Water Areas** * Capital cost: ₹10.00 lakh (approximately $13,500 USD) + Components include earthwork, polythene lining, inlet/outlet system, PVC pipes, pump house, pumps, aeration system, generator set, miscellaneous equipment * Input costs for one crop cycle: ₹8.00 lakh (approximately $11,000 USD) + Includes seeds, feed, electricity, fuel, harvesting charges, transportation, and other expenses